

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Work Order ID 141274

141274

Page 2

Wednesday, February 03, 2016 10:52:09 AM

Item ID: D350-567-141 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Floor Window Close Out
 Start Date: 2/3/2016 Start Qty: 2.00 ***2*** Cust Item ID:
 Required Date: 2/19/2016 Req'd Qty: 2.00 ***2*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Packaging	0.00							
130									
Packaging	Memo	0.00				DAS			FEB 12 2016
Packaging	Identify and pack for shipping as per PPP D350-567-141					6			
	Location: FG033					9-89			
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							MCS FEB 19 2016
Quality Control									

Rick K14

DAS
6
9-89

FEB 16 2016

20150219
STH

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

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Page 1

Work Order ID: 141274

141274

Parent Item: D350-567-141

D350-567-141

Parent Item Name: Floor Window Close Out

Start Date: 2/3/2016

Required Date: 2/19/2016

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A 11.11.09 new issue DD verf:JLM IPP REV:B
12.01.23 AS PER ECN12-511 DD VERF:EC IPP REV:C 12.03.05
AS PER ECN12-537 DD VERF:EC IPP REV:D 13.04.01 AS PER
DSI9590 REV.E DD VERF:JLM IPP REV :E AS PER DSI9590 REV F JLM
VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4434-047 *D4434-047* Cover Assembly	DAS 9 9-89	Manufactured	No				Each	5.0000		2			
									**				DAS 6 9-89
					<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>			
					ST619			5		2			
					138349			5					
D3802-1 *D3802-1* Windows Seal (\$ Per Foot)	DAS 9 9-89	Manufactured	No			110	f	88.7500	2	4			
									**				DAS 6 9-89
					<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>			
					ST416			88.75					
					134091			2.75					
					140492			86					
(D3802-1-024) CUT (1) AT 24" AS PER DWG, PER KIT.													FEB 16 2016
D4434-041 *D4434-041* Fwd Bracket Assembly	DAS 9 9-89	Manufactured	No			110	Each	2.0000	1	2			
									**				DAS 6 9-89
					<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>			
					ST623			2		2			
					135963			2					FEB 16 2016

SNP
1X24 per kit

DQA: _____ Date: _____



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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

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Work Order ID: 141274

141274

Parent Item: D350-567-141

D350-567-141

Parent Item Name: Floor Window Close Out

Start Date: 2/3/2016

Required Date: 2/19/2016

Start Qty: 2.00

Required Qty: 2.80

D4435-045

DAS

Manufactured No

110

Each

3.0000

1

2

D4435-045

9
9-89

T/R Bellcrank Cover Assembly

**

Location

Loc Qty

Loc Code

ST620

3

127215

3

D4435-9

Manufactured No

110

Each

2.0000

2

4

D4435-9

DAS
9
9-89

Bracket

**

Location

Loc Qty

Loc Code

ST098

2

140184

2

D4436-041

Manufactured No

110

Each

5.0000

1

2

D4436-041

Aft Bracket Assembly

DAS
9
9-89

**

Location

Loc Qty

Loc Code

ST618

5

140130

1

140879

4

D4441-1

Manufactured No

110

f

457.0654

2

4

D4441-1

Rubber Seal

DAS
9
9-89

**

Location

Loc Qty

Loc Code

ST422

457.0654

120932

457.0654

(D4441-1-240) CUT (1) AT 24.00" PER KIT

DAS

6

9-89

DAS

6

9-89

FEB 19 2016

DAS

6

9-89

DAS

6

9-89

FEB 16 2016

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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
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Work Order ID: 141274

141274

Parent Item: D350-567-141

D350-567-141

Parent Item Name: Floor Window Close Out

Start Date: 2/3/2016

Required Date: 2/19/2016

Start Qty: 2.00

Required Qty: 2.00

AN3-3A Purchased No

110 Each 259.0000 7 14

AN3-3A DAS
9
9-89
Bolt

DAS
6
9-89

Location

Loc Qty

Loc Code

ST350

259

m131624

101

m133833

58

m134034

100

AN525-10R6 Purchased No

110 Each 112.0000 2 4

AN525-10R6 DAS
9
9-89
Screw

DAS
6
9-89

Location

Loc Qty

Loc Code

ST329

112

M131420

12

M133790

100

AN525-832R7 Purchased No

110 Each 174.0000 2 4

AN525-832R7 DAS
9
9-89
Screw

DAS
6
9-89

Location

Loc Qty

Loc Code

ST328

174

m131957

24

m134070

150

MS21042L06 Purchased No

110 Each 161.0000 7 14

MS21042L06 DAS
9
9-89
Nut

DAS
6
9-89

Location

Loc Qty

Loc Code

ST303

161

m133363

11

m133932

50

m134063

100

FEB 16 2016

DQA: _____ Date: _____



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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐							
Misidentified ☐	☐	Past Due ☐	OTHER : ☐						

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Work Order ID: 141274

141274

Parent Item: D350-567-141

D350-567-141

Parent Item Name: Floor Window Close Out

Start Date: 2/3/2016

Required Date: 2/19/2016

Start Qty: 2.00

Required Qty: 2.00

MS21042L08

Purchased

No

110

Each

2,058.000

2

4

MS21042L08

DAS
9
9-89

DAS
6
9-89

Nut

Location

Loc Qty

Loc Code

CA 101

m129682 101

GA 3

m133134 3

OVER007 1000

m134063 1000

ST303 954

m133922 954

MS21042L3

DAS
9
9-89

Purchased

No

110

Each

2,423.000

5

10

MS21042L3

DAS
6
9-89

Nut

Location

Loc Qty

Loc Code

CCK007 2000

m134039 2000

FP001 163

m133790 163

GA 195

m133790 195

ST304 65

m133790 65

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
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Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

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Work Order ID: 141274

141274

Parent Item: D350-567-141

D350-567-141

Parent Item Name: Floor Window Close Out

Start Date: 2/3/2016

Required Date: 2/19/2016

Start Qty: 2.00

Required Qty: 2.00

MS21059L3

Purchased

No

110

Each

179.0000

2

4

MS21059L3

Nut Plate

DAS

9

9-89

DAS

6

9-89

Location

Loc Qty

Loc Code

CA

8

M129682

8

ST301

140

M133363

40

M133990

50

M134055

50

ST303

31

M131616

5

M133016

26

MS35206-229

Purchased

No

110

Each

172.0000

7

14

MS35206-229

Screw

DAS

9

9-89

DAS

6

9-89

Location

Loc Qty

Loc Code

ST271

172

M132763

22

M134070

150

NAS1149F0332P

Purchased

No

110

Each

3,548.000

12

24

NAS1149F0332P

Washer

DAS

9

9-89

DAS

6

9-89

Location

Loc Qty

Loc Code

GA

396

m133709

396

ST260a

1500

m134134

1500

ST262

1652

m133938

152

m134055

1500

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DQA: _____ Date: _____



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Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

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Work Order ID: 141274

Parent Item: D350-567-141

Parent Item Name: Floor Window Close Out

141274

D350-567-141

Start Date: 2/3/2016

DAS
Required Date: 2/19/2016

Start Qty: 2.00

Required Qty: 2.00

NAS1149FN616P

Purchased

No

110

Each

136.0000

14

28

NAS1149FN616P

DAS

WASHER

9

9-89

Location

Loc Qty

Loc Code

ST263

100

M133988

100

ST267

36

M132763

36

NAS1149FN816P

Purchased

No

110

Each

772.0000

2

4

NAS1149FN816P

DAS

WASHER

9

9-89

DAS

6

9-89

Location

Loc Qty

Loc Code

st268

772

117316

772

FEB 16 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D350-567 REV. E OR EARLIER
AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D350-567 REV. 2 OR EARLIER

REF CANADIAN STC: SH92-18

FAA STC: SH989NE

FAA STC: SH990NE

1.0 Purpose

The purpose of this service instruction is to add the D350-567-141/-143/-145 Close-out Kits, which are intended for customers wishing to operate their aircraft with the interior floor window removed. The D350-567-141/-143/-145 Floor Window Close-out Kits provide a barrier around the interior and exterior vertical reference floor window to prevent objects from falling into the aircraft controls when the interior floor window is removed as shown in Figure 1. The -143 Kit is identical to the -141 Kit with the exception of the D4971-041 T/R Bellcrank Cover Assy which replaces the D4435-045 T/R Bellcrank Cover Assy on aircraft fitted with energy attenuating seats. The -145 Kit is similar to the -143 Kit but is only kit compatible with the AS350 B3e aircraft.

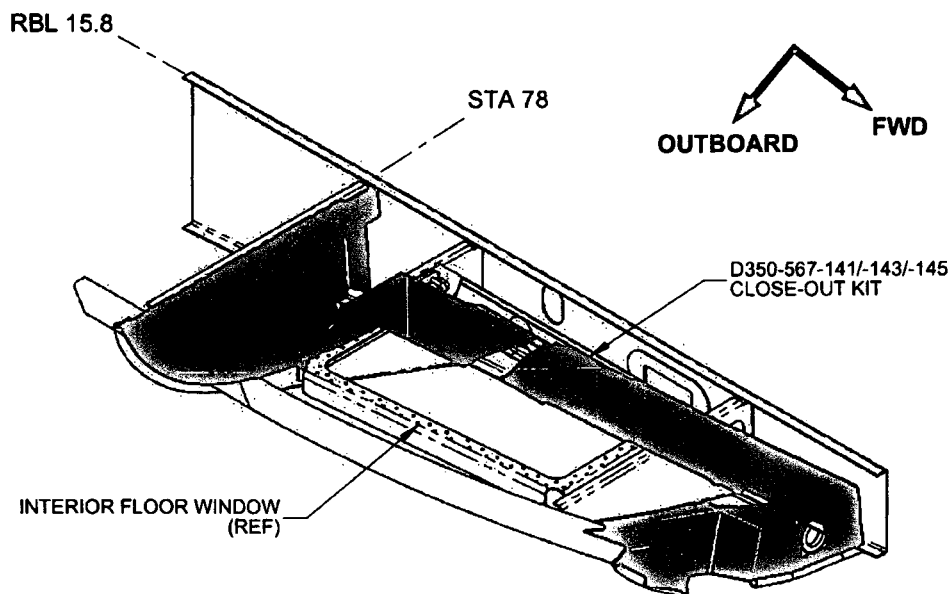


Figure 1. Floor Window Close-out Kit Installation

F	ADDED D4434-047 TO -141 KIT SEE PAR14-372.	AJS	15.01.12
E	ADD -143/-145 KITS	RF	14.03.20
E	CLARIFY FIGURES 3-12	VS	13.09.11
C	CORRECT TYPO NAS1149FN816P WAS NAS1149FN882P	RF	12.03.13
B	MS35206-229 WAS AN525-632R6; NAS1149FN816P (Qty 14) WAS (Qty 9); MS21042L06 (Qty 7) WAS (Qty 9); ADD AN525-832R7, NAS1149FN882P & MS21042L08	RF	12.02.22
A	NEW ISSUE	RF	12.01.09
REV.	DESCRIPTION	BY	DATE
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CHECKED		DRAWING NO.	REV. F
MFG. APPR.	N/A	DSI 9590	SHEET 1 OF 19
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BRANCH
DAO # 01-O-01

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2.0 Parts List

Qty -141	Qty -143	Qty -145	Part Number	Description
X			D350-567-141	FLOOR WINDOW CLOSE-OUT KIT (REGULAR SEATS)
	X		D350-567-143	FLOOR WINDOW CLOSE-OUT KIT (ENERGY ATTENUATING SEATS)
		X	D350-567-145	FLOOR WINDOW CLOSE-OUT KIT (AS 350 B3e)
1	1	1	D3802-1-024	SEAL (24")
1	1		D4434-041	FWD BRACKET ASSEMBLY
1	1		D4434-047	COVER ASSEMBLY
1			D4435-045	T/R BELLCRANK COVER ASSEMBLY
2	2	2	D4435-9	BRACKET
1	1	1	D4436-041	AFT BRACKET ASSEMBLY
1	1	1	D4441-1-240	RUBBER SEAL (24")
		1	D4730-020-030	VELCRO STRIP
	1	1	D4971-041	T/R BELLCRANK COVER ASSEMBLY
		1	D5076-041	FWD BRACKET ASSEMBLY
7	5	5	AN3-3A	BOLT
2	2	2	AN525-10R6	SCREW
2	2	2	AN525-832R7	SCREW
		1	CB 200	3.5g ACRYLIC ADHESIVE
7	7	7	MS21042L06	NUT (OR MS21042-06)
2	2	2	MS21042L08	NUT (OR MS21042-08)
5	5	5	MS21042L3	NUT (OR MS21042-3)
2	2	2	MS21059L3	NUTPLATE
7	7	7	MS35206-229	SCREW
12	10	10	NAS1149F0332P	WASHER (AN960-10L)
14	14	14	NAS1149FN616P	WASHER (OR AN960-6L)
2	2	2	NAS1149FN816P	WASHER (OR AN960-8L)

3.0 Weight and Balance

The following is the net weight increase associated with the D350-567-141/-143/-145 Kits.

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D350-567-141/-143/-145	3.9 lb	17.9 in	69.8 in-lb	65.5 in	255.5 in-lb
Floor Window Close-out Kit	1.77 kg	0.45 m	0.80 m-kG	1.66 m	2.94 m-kG

4.0 Installation Procedure

Notes:

- Figure 2 shows the general arrangement and installation of the D350-567-141/-143/-145 Close-out Kits. The procedure that follows outlines the step-by-step procedures for installing the kit with reference photos from the initial installation.
- In conjunction with this modification, it is acceptable to remove the interior floor windows as applicable. Note that the structural reinforcement around the window opening is still required.
 - D350-567-115 - OK to remove D3295-041
 - D350-567-031 - OK to remove D3212-1
 - D350-567-011 - OK to remove D2214
 - D350-567-021 - OK to remove D2951
- It is acceptable to drill/trim the D350-567-141/-143/-145 Close-out Kits as required to improve fit.

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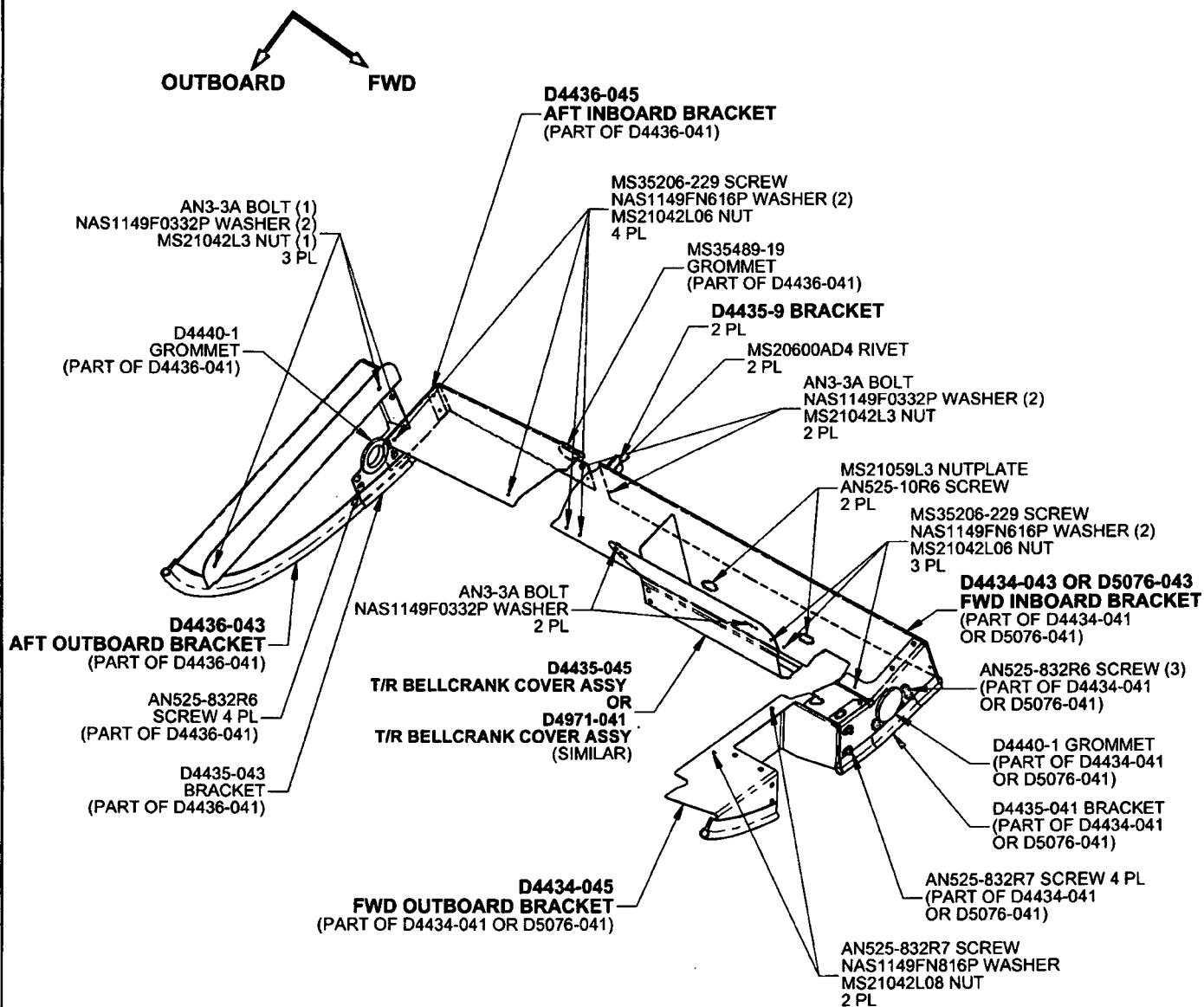


Figure 2. Floor Window Close-out Kit Installation

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4.1 Temporarily install D4436-043 Aft Outboard Bracket and D4436-045 Aft Inboard Bracket using clecos and/or cleco clamps. Before drilling holes:

- a) Position the D4436-043 Aft Outboard Bracket so the flange contacts the main beam as shown in Figure 3.
- b) Confirm that the D4436-043 Aft Outboard Bracket and beam angle are parallel as shown in Figure 4.

4.2 Temporarily install D4434-043/D5076-043 Fwd Inboard Bracket and D4434-045 Fwd Outboard Bracket using clecos and cleco clamps. Confirm there is no contact between D4436-045 Aft Inboard Bracket and D4434-043 /D5076-043 Fwd Inboard Bracket and main beam gusset as shown in Figure 5.

F 4.3 For -141 installations, if aircraft is equipped with Collective Circuit Breaker Board box, trim D4434-043 Fwd Inboard Bracket as shown in Figure 14. Note: Confirm the D4434-047 Bracket fits over the Collective Circuit Breaker Board box. Adjust opening as required.

4.4 For -143 installations, if aircraft is equipped with Collective Circuit Breaker Board box, trim D4434-043 Fwd Inboard Bracket as shown in Figure 14. Install D4971-041 T/R Bellcrank cover as shown in Figure 13b. Note: Confirm the D4434-047 Bracket fits over the Collective Circuit Breaker Board box. Adjust opening as required.

4.5 For -145 installations, if aircraft is equipped with Collective Circuit Breaker Board box, use D5076-043 Fwd Inboard Bracket as shown in Figure 13c. Install D4971-041 T/R Bellcrank cover as shown in Figure 13c. Note: Confirm the D5076-3 Cover fits over the Collective Circuit Breaker Board box. Adjust opening as required.

4.6 Drill out rivets holding plastic wire bundle stand offs. Transfer drill $\varnothing 0.144$ holes to D4436-045 Aft Inboard Bracket per Figure 6. Transfer drill 2 x $\varnothing 0.144$ holes to D4434-043/D5076-043 Fwd Inboard Bracket per Figure 7. Transfer drill 2 x $\varnothing 0.144$ holes for D4434-043/D5076-043 Fwd Inboard Bracket per Figure 8. Before drilling confirm the D4434-043/D5076-043 and D4436-045 brackets are flush with outboard edge of main beam flange. Assemble D4436-045 Aft Inboard Bracket and D4434-043/D5076-043 Fwd Inboard Bracket and wire bundle stand offs to main beam flange using MS35206-229 screw, NAS1149FN616P washer and MS21042L06 nut.

4.7 Install D4436-043 Aft Outboard Bracket using AN3-3A bolt and NAS1149F0332P washer and MS21042L3 nut per Figure 9.

4.8 Remove 2 rivets holding RH heating plastic stand off as shown in Figure 10. Position the D4435-9 Brackets on the in/outboard sides of the cross beam and transfer drill 2 x $\varnothing 0.129$ holes from crossbeam to both D4435-9 Brackets. Install D4435-9 Brackets and RH heating plastic stand off using MS20600AD4 rivets or equivalent.

4.9 Drill a pilot hole from D4435-9 Bracket to the D4434-043/D5076-043 Fwd Inboard Bracket and D4436-045 Aft Inboard Bracket and open to $\varnothing 0.191$. Install AN3-3A bolt, NAS1149F0332P washer and MS21042L3 nut as shown in Figure 10. Be sure to maintain edge distance.

4.10 Transfer drill 2 x $\varnothing 0.144$ holes from crossbeam to D4434-045 Fwd Outboard Bracket if holes exist in crossbeam. If holes do not exist, drill 2 x $\varnothing 0.144$ holes at either end of D4434-045 bracket as shown in Figure 11. Install AN525-832R7 screws, NAS1149FN816P washer and MS21042L08 nuts.

4.11 FOR D350-567-141 KIT

a) Align D4435-045 T/R Bellcrank Cover Assy with existing holes in RH seat track lower frame and temporarily install using clecos and/or cleco clamps as shown in Figure 12a.

b) Transfer drill 2 x $\varnothing 0.098$ holes from D4435-045 T/R Bellcrank Cover Assy to D4434-043 Fwd Inboard Bracket. Open holes to $\varnothing 0.191$ and install MS21059L3 nut plate into D4434-043 Fwd Inboard Bracket as shown in Figure 12a and Figure 13a. Install D4435-045 T/R Bellcrank Cover Assy using AN525-10R6 screw, AN3-3A bolt and NAS1149F0332P washer per Figure 12a and Figure 13a.

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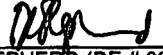
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4.12 FOR D350-567-143/-145 KIT

- a) Remove the D4972-041 Side Plate Assy from the D4971-041 T/R Bellcrank Cover Assy and retain fasteners.
 - b) Align D4971-1 T/R Bellcrank Cover with existing holes in RH seat track lower frame and temporarily install using clecos and/or cleco clamps as shown in Figure 12b.
 - c) Bond D4730-020-030 Velcro to back of D4971-1 T/R Bellcrank Cover as shown in Figure 12b using CB 200 adhesive.
 - d) Transfer drill 2 x $\varnothing 0.098$ holes from D4971-1 Cover Plate to D4434-043/D5076-043 Fwd Inboard Bracket. Open holes to $\varnothing 0.191$ and install MS21059L3 nut plate into D4434-043/D5076-043 Fwd Inboard Bracket as shown in Figure 13b/13c. Install D4971-1 Cover Plate using AN525-10R6 screws and D4730-020-030 Velcro per Figure 12b and Figure 13b/13c.
 - e) Re-install the D4972-041 Side Plate Assy using the retained fasteners.
- 4.13 The D4440-1 grommets are provided to facilitate the routing of wiring harness thru the close-out kit as required. The wiring harness should be secure to the aircraft structure per AC 43.13.13-1B or AS350 Chapter 20.02.01.
- 4.14 Use the D3802-1-024 Seal to fill gaps between the brackets and the cowlings that are larger than 0.25 inch.
- 4.15 Perform travel/interference check of the flight controls to ensure there is no interference and all controls still have full travel.
- 4.16 Ensure there is a gap between the components of the D350-567-141/-143/-145 Close-out Kit and the aircraft structure so that the Close-out Kit does not chafe, interfere, or cause damage to the surrounding aircraft structure. In areas where the D350-567-141 /-143/-145 Close-out Kit may contact the aircraft structure, protect from abrasion using chafing tape or a layer Proseal 890 or MIL-S-8802 class B2 sealant or equivalent as required.

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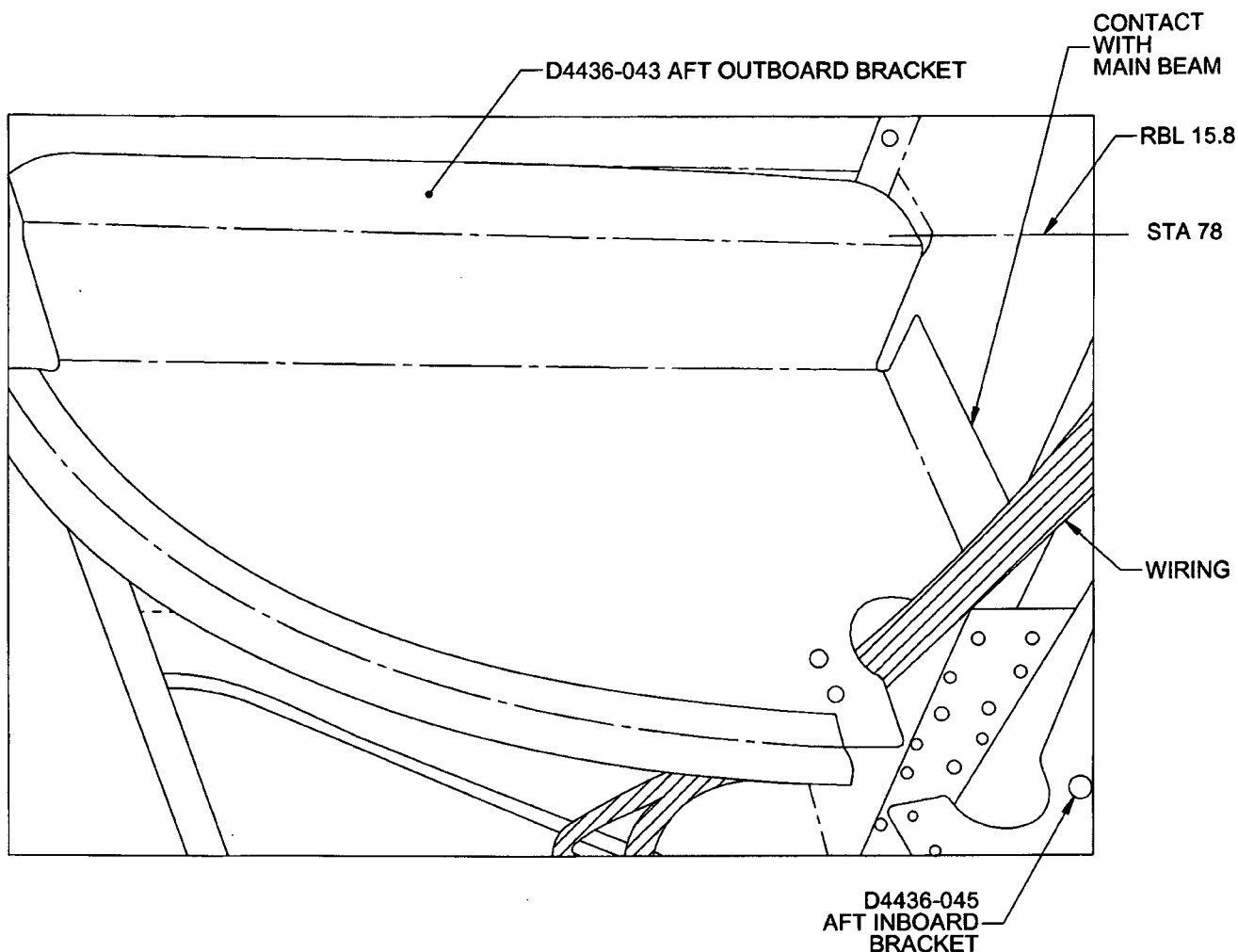


Figure 3. D4436-043 Aft Outboard Bracket Installation

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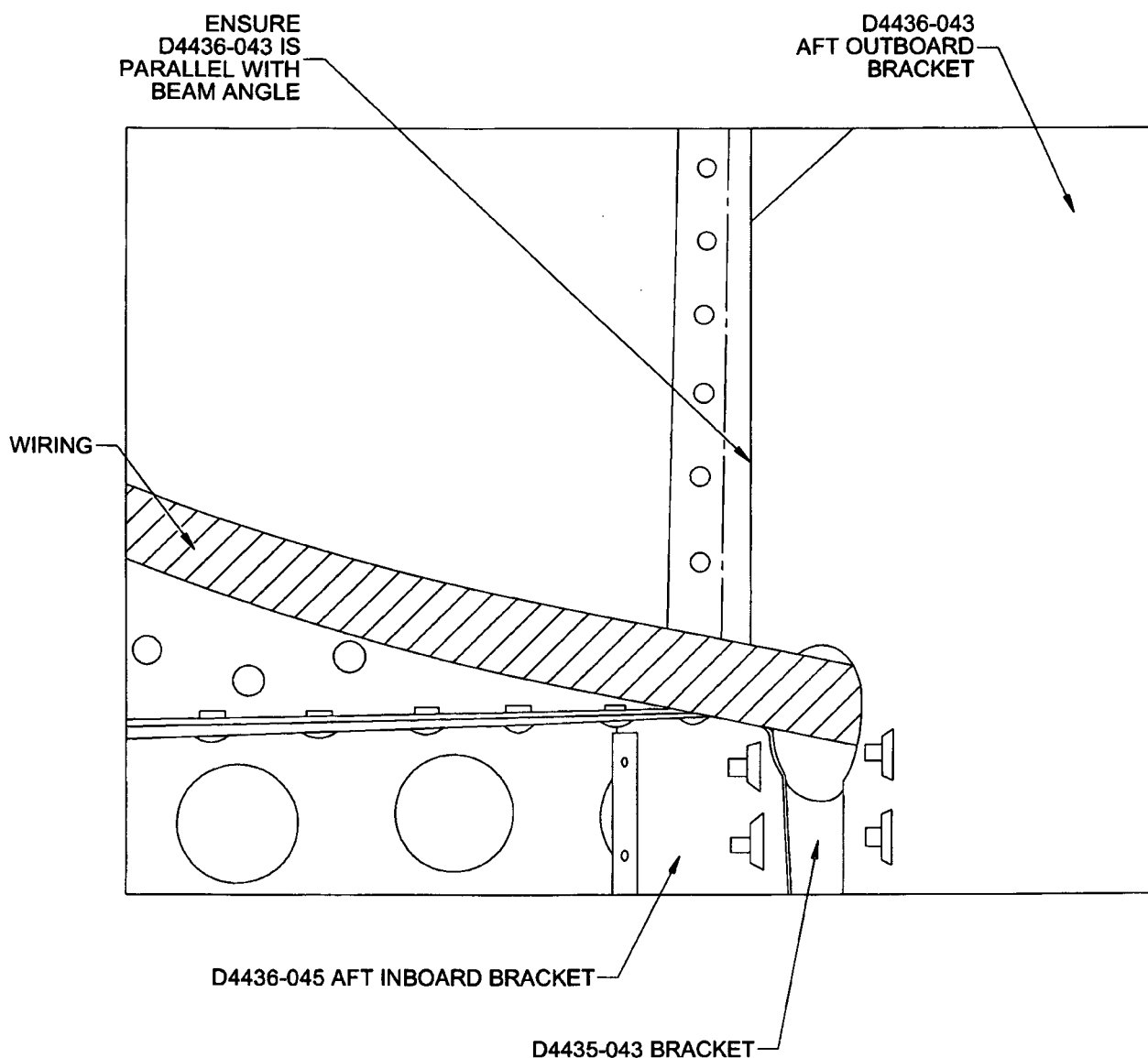


Figure 4. D4436-043 & D4435-043 Brackets Installation

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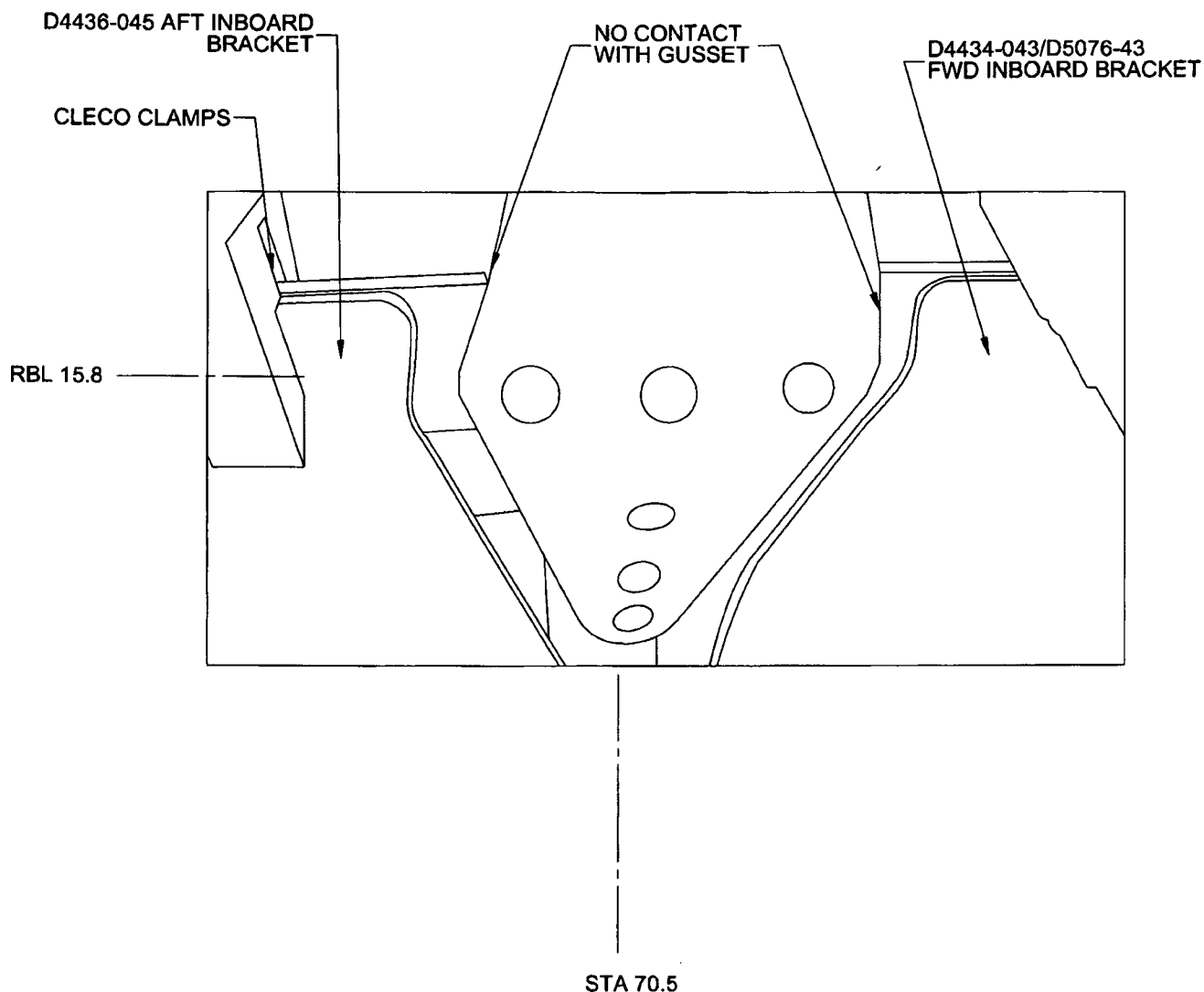


Figure 5. D4436-045 & D4434-043/D5076-043 Brackets Installation

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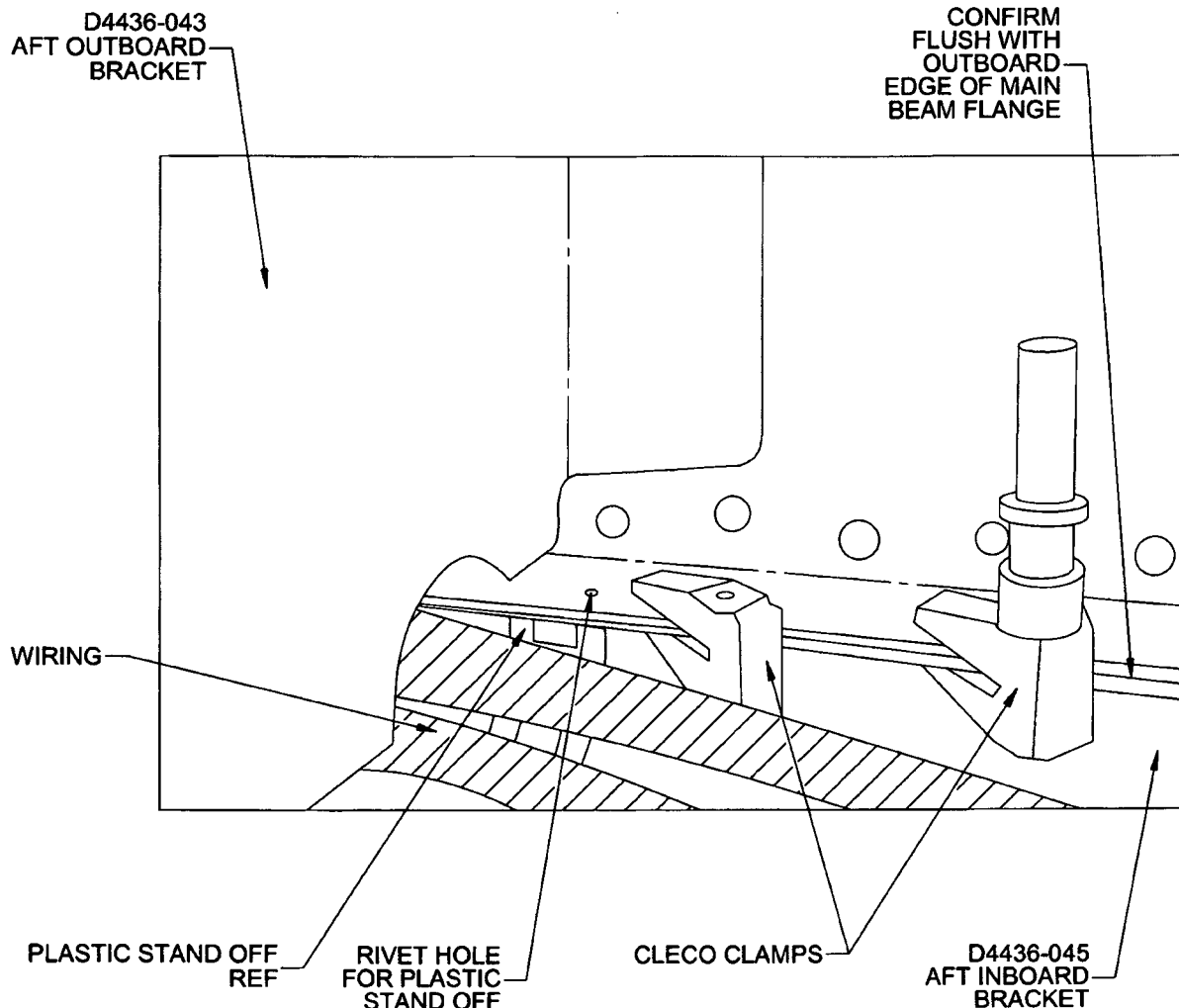


Figure 6. D4436-043 & D4436-045 Brackets Installation

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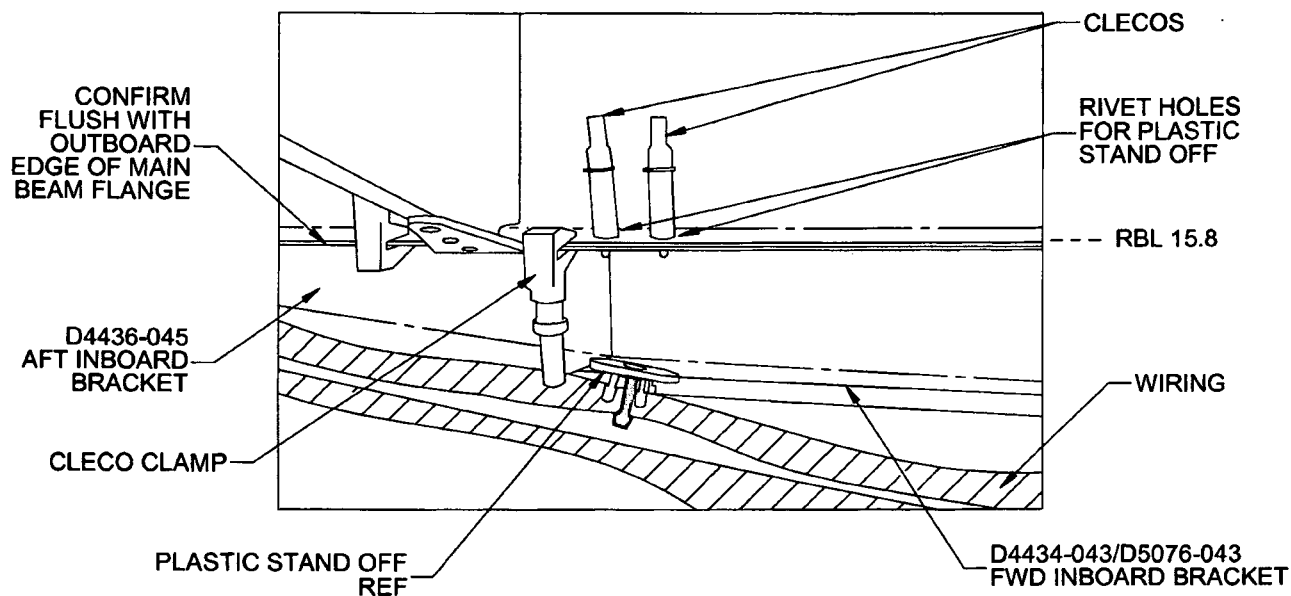


Figure 7. D4434-043/D5076-043 & D4436-045 Brackets Installation

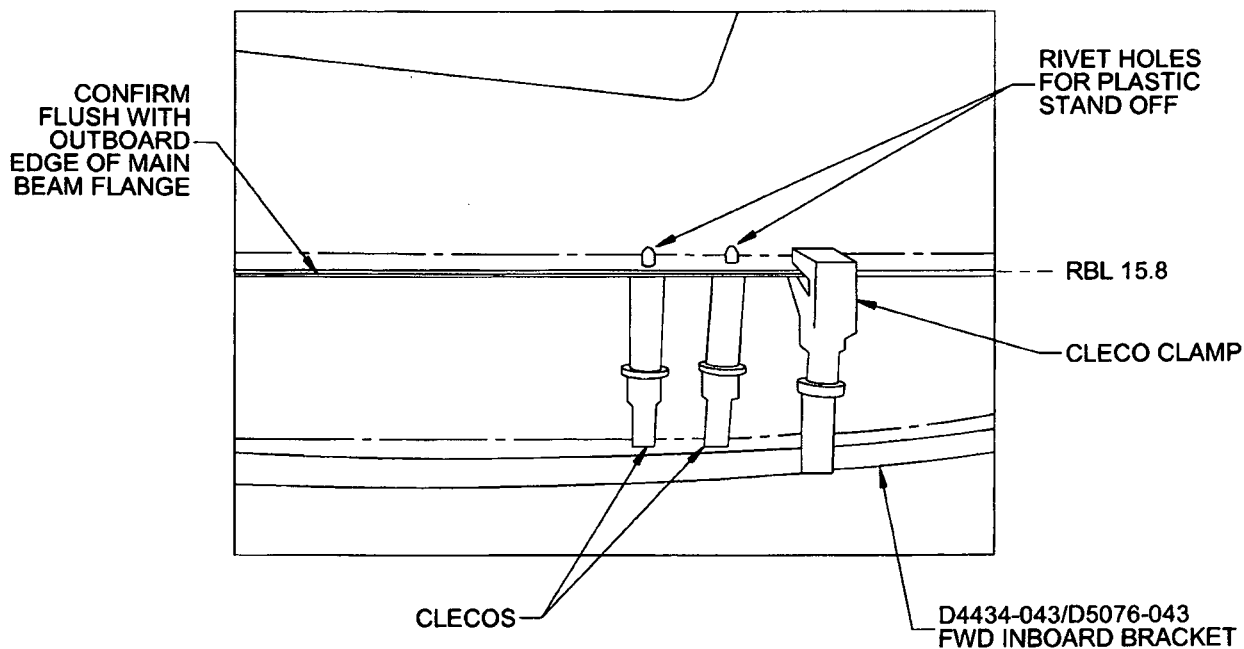


Figure 8. D4434-043/D5076-043 Fwd Inboard Bracket Installation

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INSTALL
D4436-043
AFT OUTBOARD BRACKET
USING
AN3-3A BOLT (1)
NAS1149F0332P WASHER (2)
MS21042L3 NUT (1)
3 PL

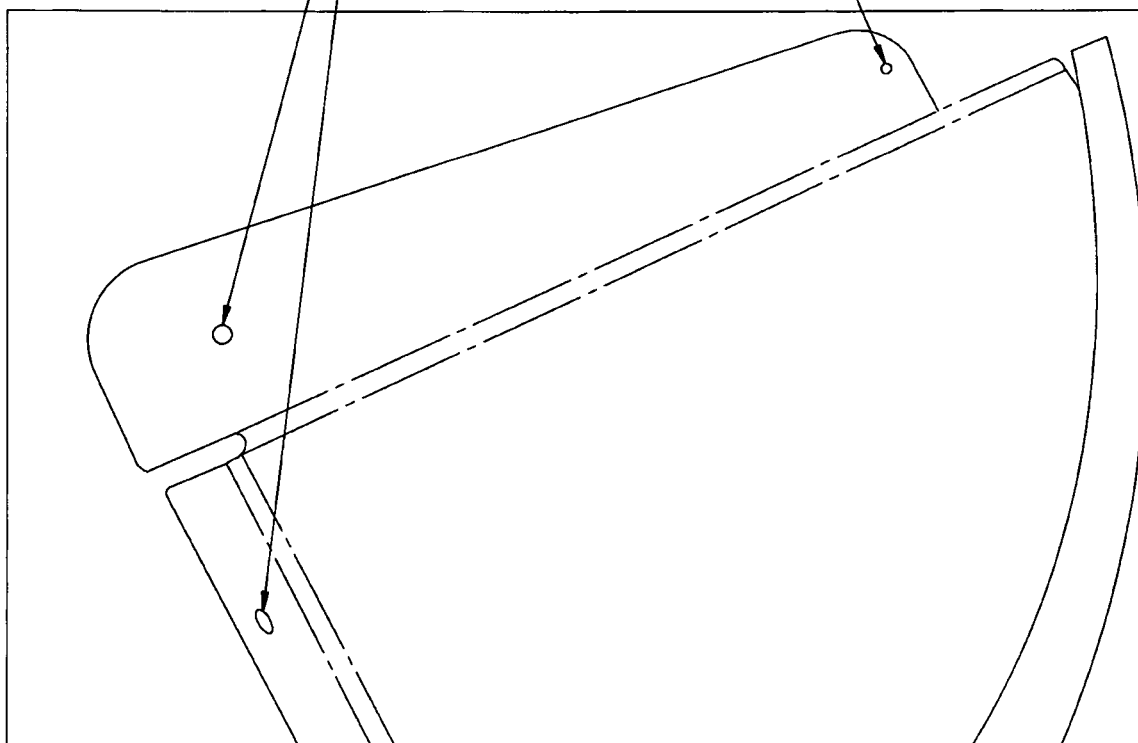


Figure 9. D4436-043 Aft Outboard Bracket Installation

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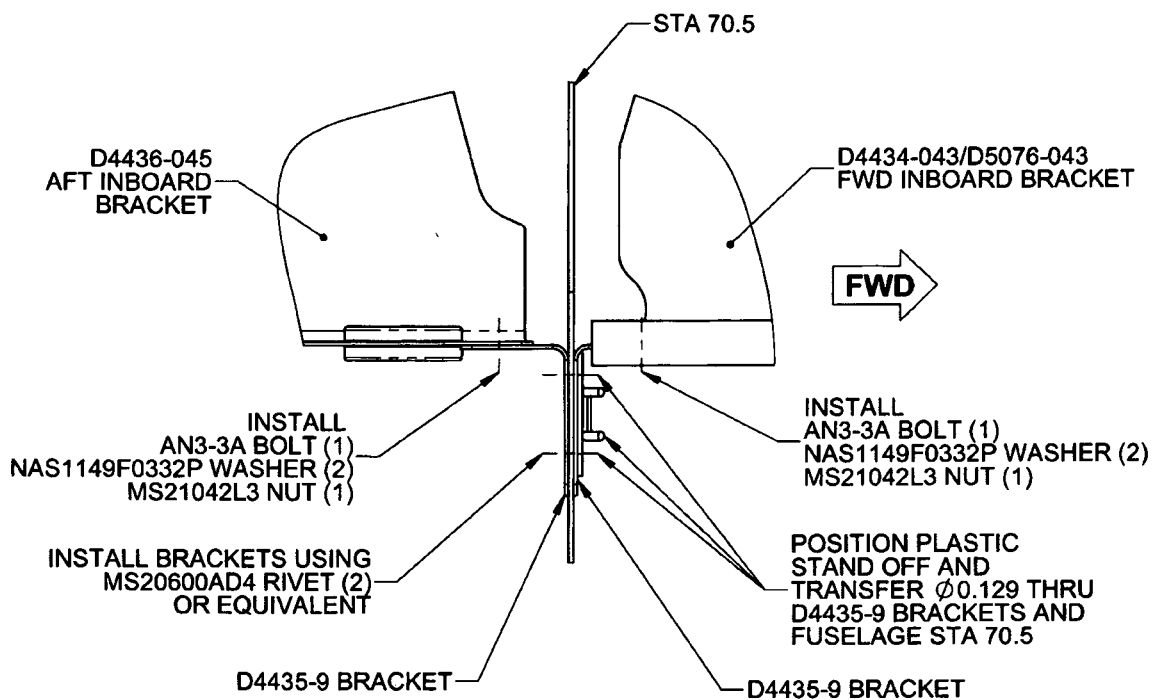
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LOOKING UP AT STA 70.5

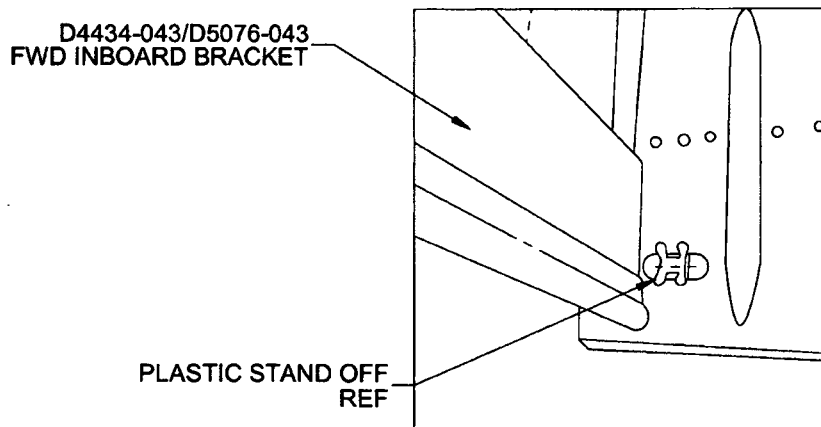


Figure 10. D4434-043/D5076-043 and D4435-9 Brackets Installation

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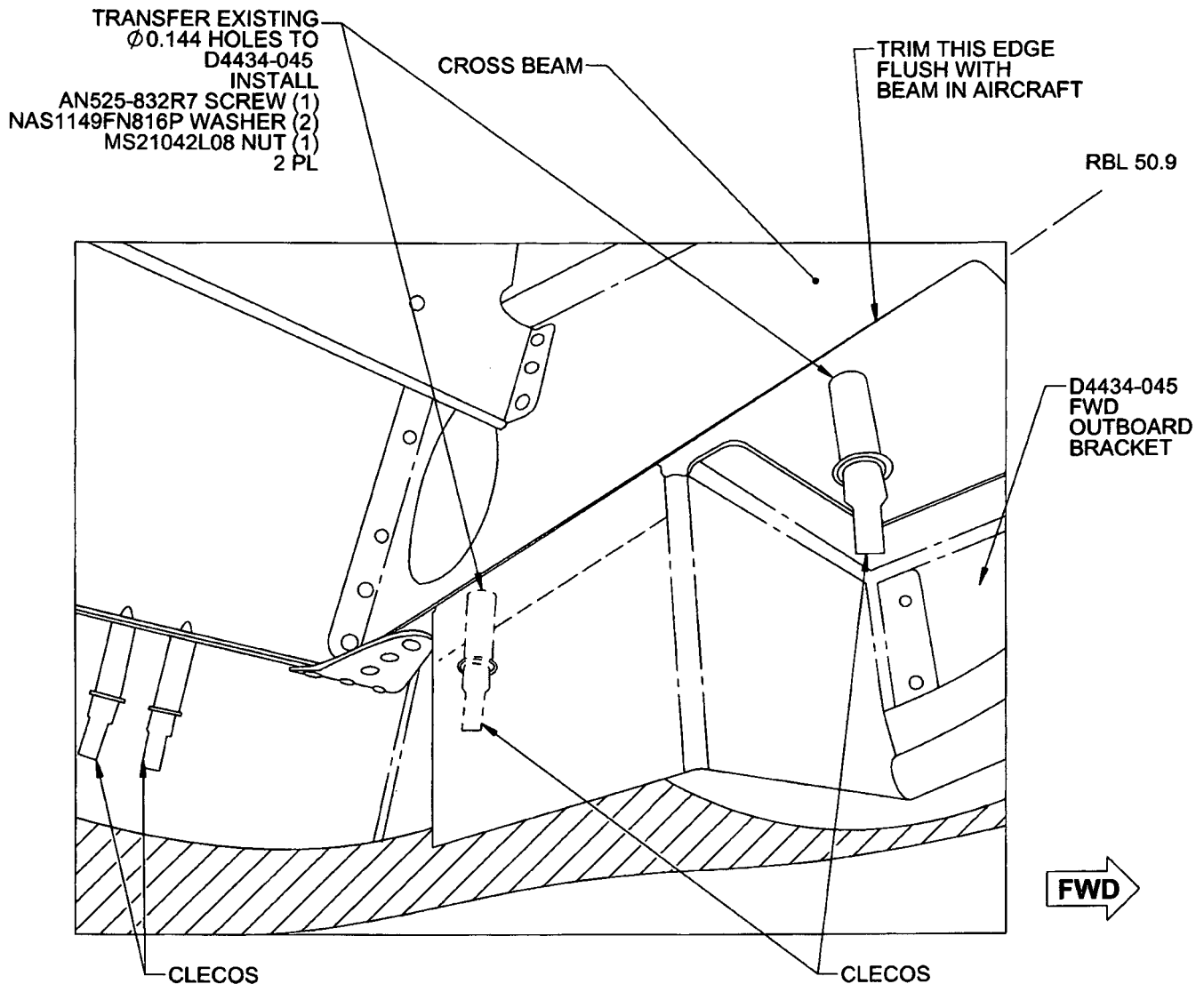


Figure 11. D4434-045 Bracket Installation

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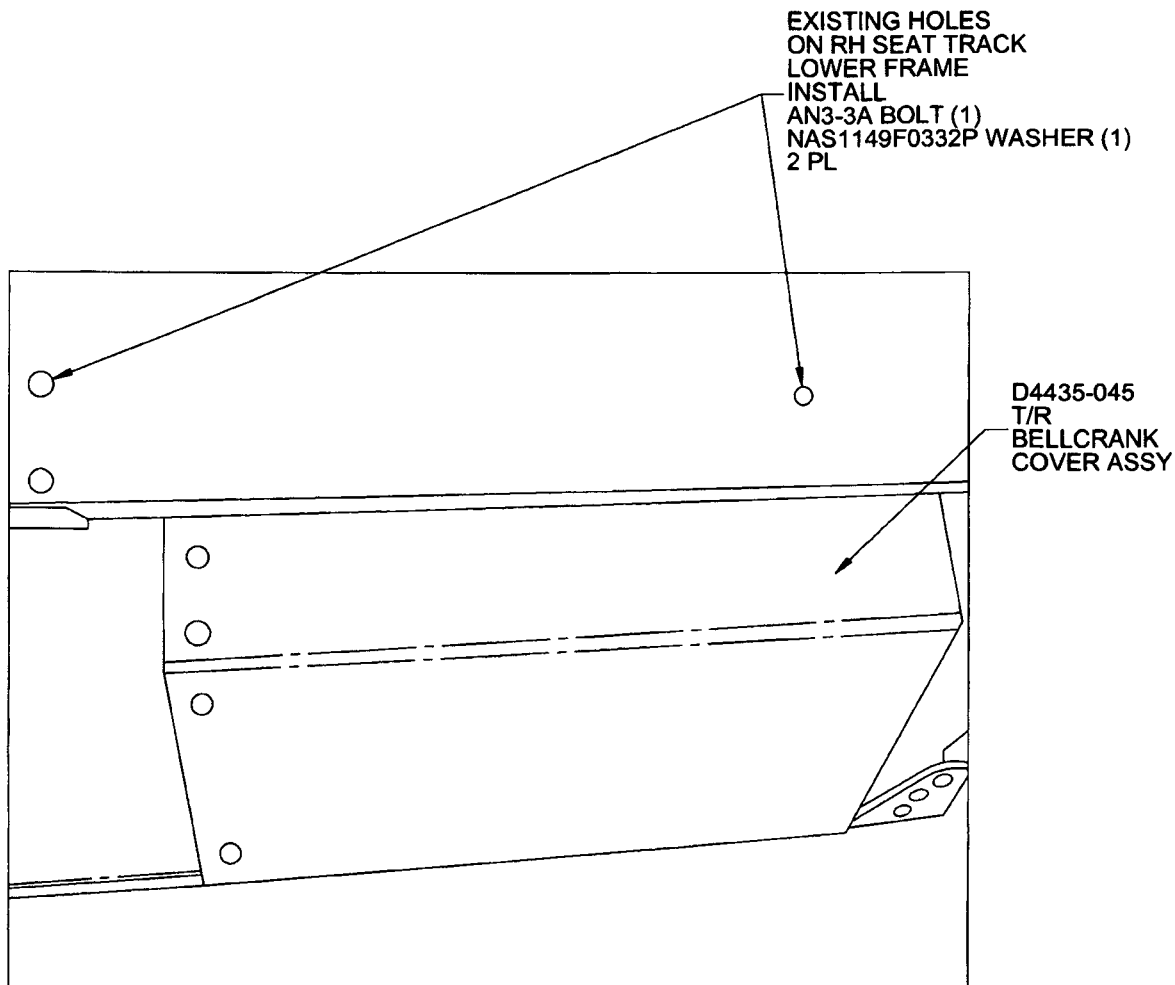


Figure 12a. D4435-045 T/R Bellcrank Cover Installation (-141)

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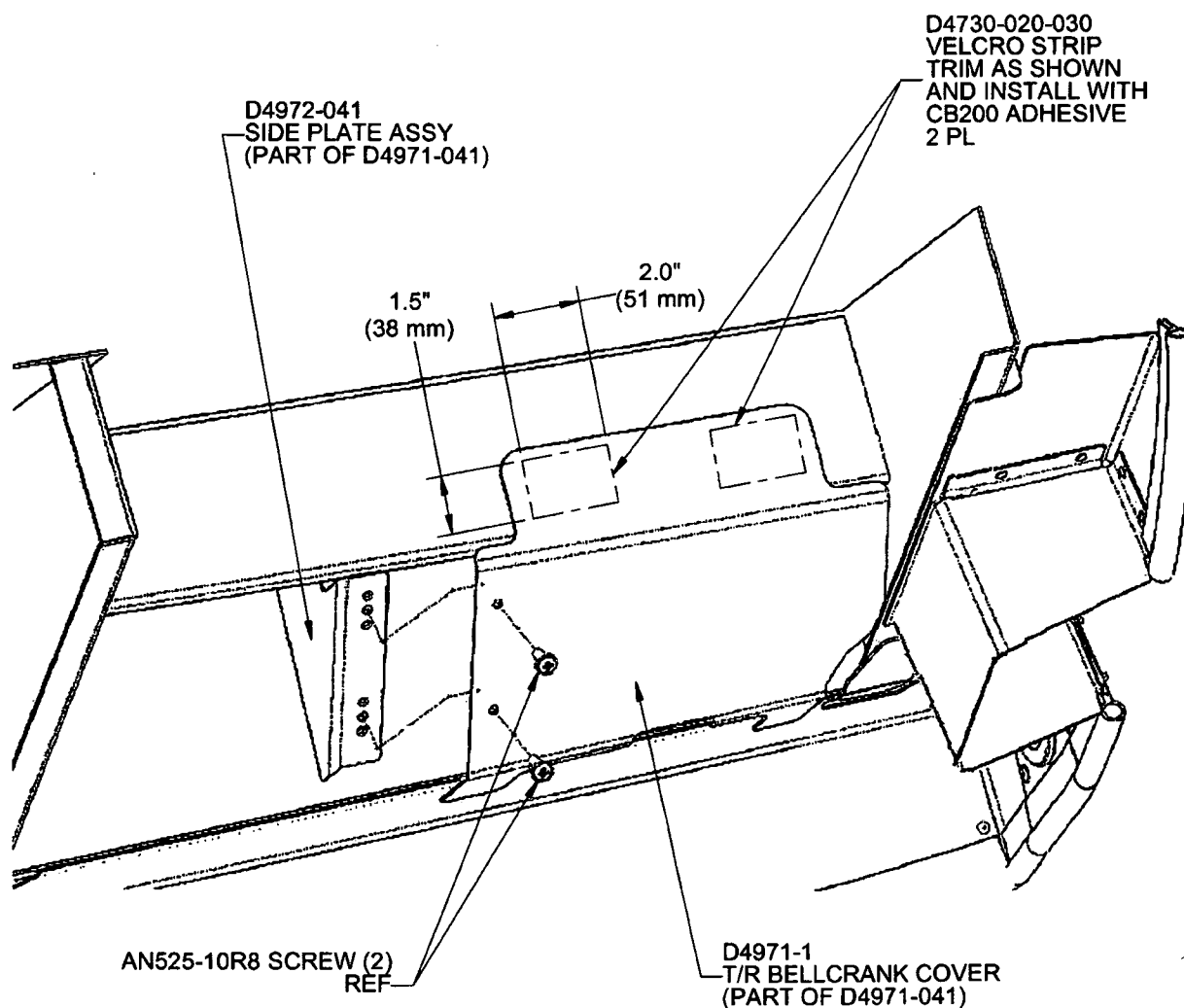


Figure 12b. D4971-041 T/R Bellcrank Cover Assy Installation (-143/-145)

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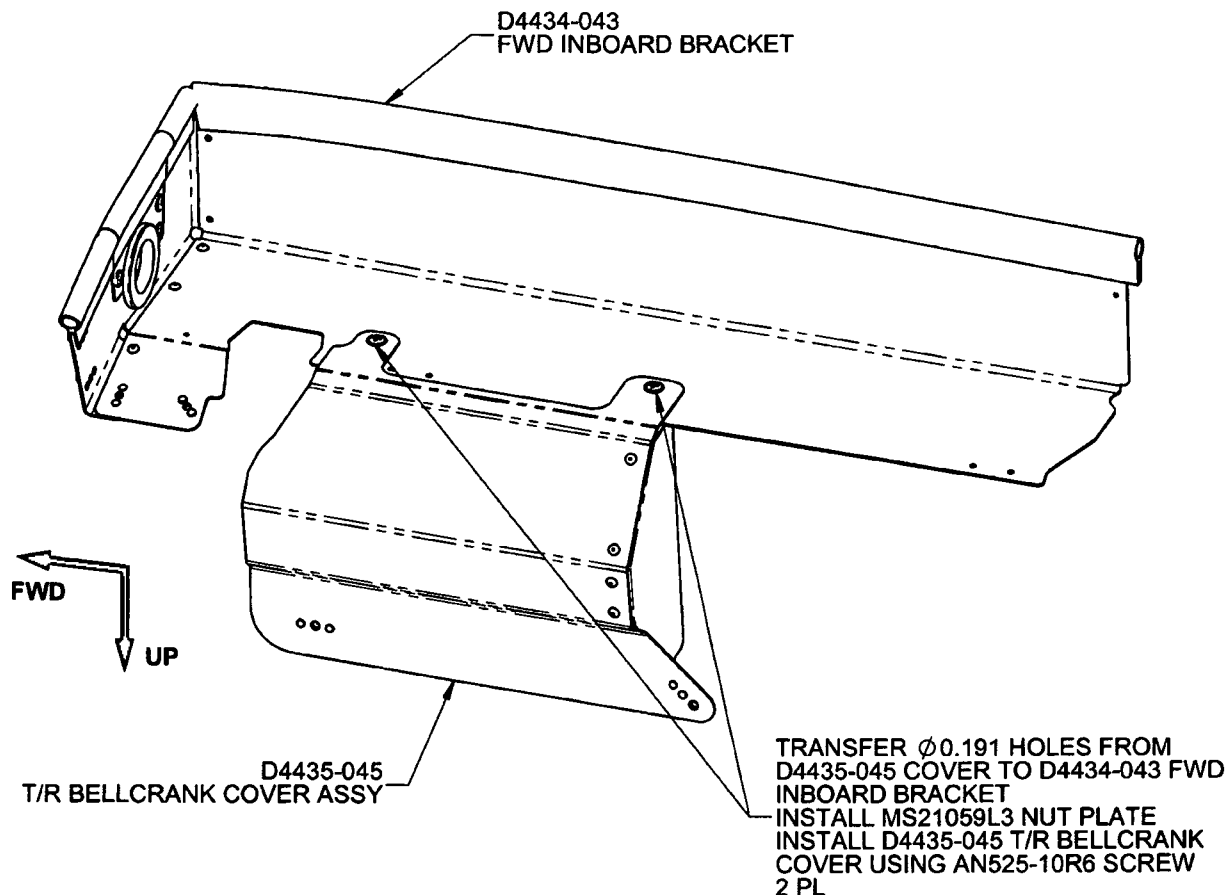


Figure 13a. D4435-045 Cover Installation (-141 ONLY)

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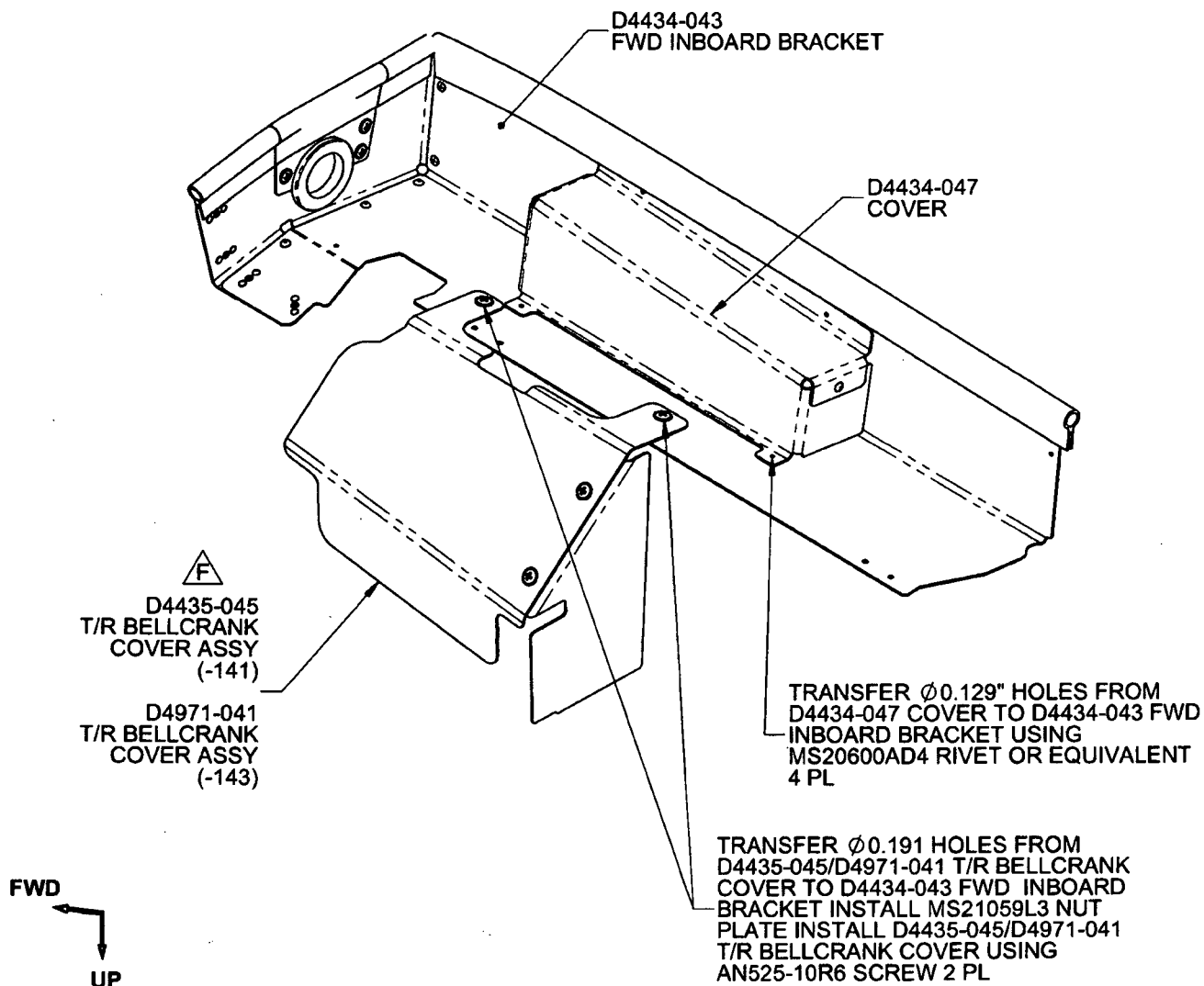


Figure 13b. D4971-041/D4435-045 & D4434-047 Cover Installation
(D4434-047 is Optional on -141)



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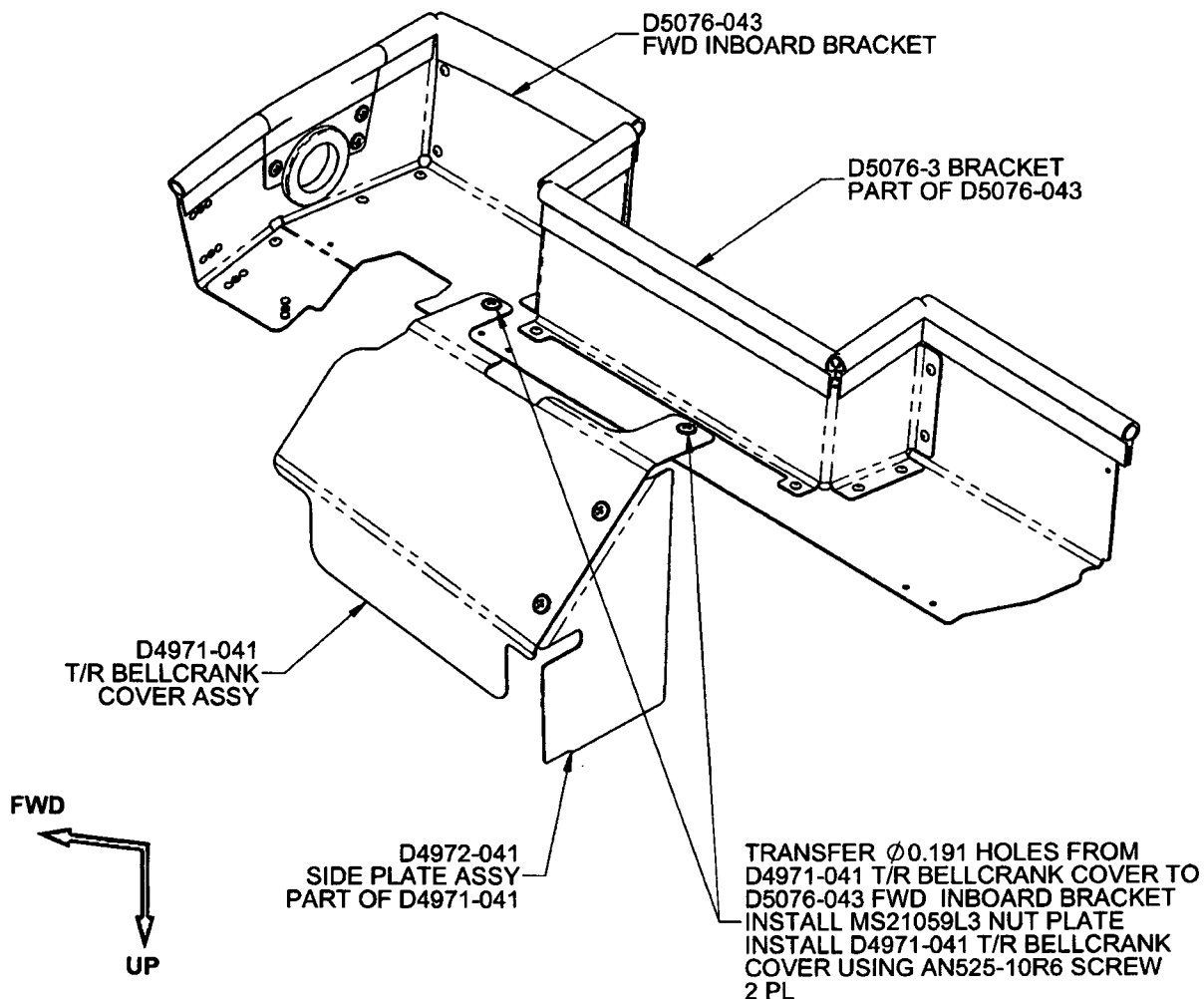


Figure 13c. D4971-041 INSTALLATION INTO D5076-043 (-145 ONLY)

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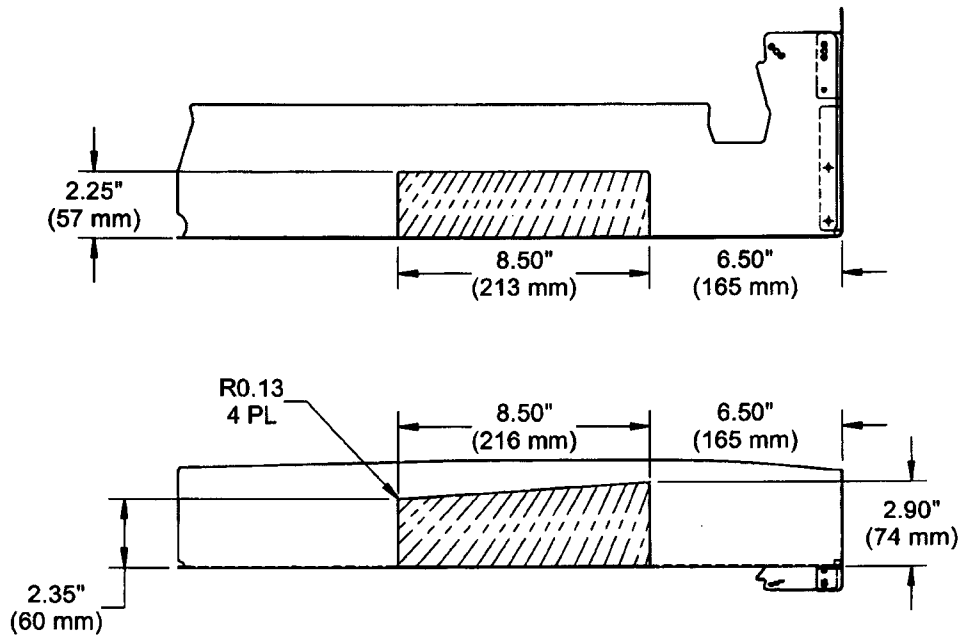
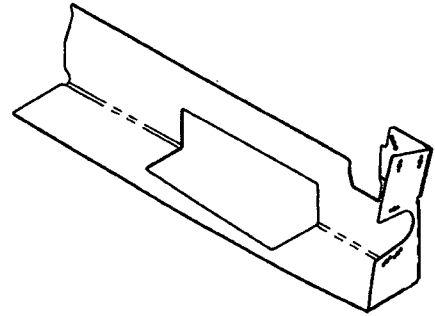


Figure 14. D4434-043 Fwd Inboard Bracket Cutout

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DAS

16-02-19

9
9-8g

2.0 Parts List

Qty -141	Qty -143	Qty -145	Part Number	Description
X			D350-567-141	FLOOR WINDOW CLOSE-OUT KIT (REGULAR SEATS)
	X		D350-567-143	FLOOR WINDOW CLOSE-OUT KIT (ENERGY ATTENUATING SEATS)
		X	D350-567-145	FLOOR WINDOW CLOSE-OUT KIT (AS 350 B3e)
1	1	1	D3802-1-024	SEAL (24")
1	1		D4434-041	FWD BRACKET ASSEMBLY
1	1		D4434-047	COVER ASSEMBLY
1			D4435-045	T/R BELL CRANK COVER ASSEMBLY
2	2	2	D4435-9	BRACKET
1	1	1	D4436-041	AFT BRACKET ASSEMBLY
1	1	1	D4441-1-240	RUBBER SEAL (24")
		1	D4730-020-030	VELCRO STRIP
	1	1	D4971-041	T/R BELL CRANK COVER ASSEMBLY
		1	D5076-041	FWD BRACKET ASSEMBLY
7	5	5	AN3-3A	BOLT
2	2	2	AN525-10R6	SCREW
2	2	2	AN525-832R7	SCREW
		1	CB 200	3.5g ACRYLIC ADHESIVE
7	7	7	MS21042L06	NUT (OR MS21042-06)
2	2	2	MS21042L08	NUT (OR MS21042-08)
5	5	5	MS21042L3	NUT (OR MS21042-3)
2	2	2	MS21059L3	NUTPLATE
7	7	7	MS35206-229	SCREW
12	10	10	NAS1149F0332P	WASHER (AN960-10L)
14	14	14	NAS1149FN616P	WASHER (OR AN960-6L)
2	2	2	NAS1149FN816P	WASHER (OR AN960-8L)

F

3.0 Weight and Balance

The following is the net weight increase associated with the D350-567-141/-143/-145 Kits.

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D350-567-141/-143/-145 Floor Window Close-out Kit	3.9 lb 1.77 kg	17.9 in 0.45 m	69.8 in-lb 0.80 m-kG	65.5 in 1.66 m	255.5 in-lb 2.94 m-kG

4.0 Installation Procedure

Notes:

1) Figure 2 shows the general arrangement and installation of the D350-567-141/-143/-145 Close-out Kits. The procedure that follows outlines the step-by-step procedures for installing the kit with reference photos from the initial installation.

2) In conjunction with this modification, it is acceptable to remove the interior floor windows as applicable.

Note that the structural reinforcement around the window opening is still required.

D350-567-115 - OK to remove D3295-041

D350-567-031 - OK to remove D3212-1

D350-567-011 - OK to remove D2214

D350-567-021 - OK to remove D2951

3) It is acceptable to drill/trim the D350-567-141/-143/-145 Close-out Kits as required to improve fit.

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BRANCH
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